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16 DEC 1983

MEMORANDUM FOR: (See Addressee List)

FROM:

[redacted]
Director of Global Issues

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SUBJECT: Colombia: Rebound in Marijuana Production

1. We estimate that Colombian marijuana production in 1983 was up almost 60 percent from last year. [redacted] of portions of Colombia's northern growing areas showed an expansion in the marijuana area and no lingering effects of the drought that cut output in 1982. Production in 1983 was thus back roughly to the levels reached during 1979-81. The attached memorandum reviews this estimate in greater detail. [redacted]

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2. The memorandum was prepared by [redacted] International Security Issues Division, Office of Global Issues. [redacted]

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3. Questions and comments are welcome and may be directed to the Chief, Strategic Narcotics Branch, OGI, [redacted]

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Attachment:

Colombia: Rebound in Marijuana Production
GI M-10243, December 1983 [redacted]

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NGA, DEA Reviews Completed

[redacted]

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GIM 83-10243

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EXTERNAL ADDRESSES (Colombia: Rebound in Marijuana Production)

Mr. Clyde Taylor
Deputy Assistant Secretary for
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Department of State

Dr. Carlton Turner
Special Assistant to the President
for Drug Abuse Policy
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Mr. J. Philip Hughes
Deputy Assistant to the Vice President
for National Security Affairs
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Mr. Gary Liming
Deputy Assistant Administrator for Intelligence
Drug Enforcement Administration

Mr. Jon Wiant
Special Assistant to the Director
Bureau of Intelligence and Research
Department of State

Captain James Haas
Chief, Intelligence and Security Division
US Coast Guard
US Coast Guard Headquarters (G-OIS)

Mr. Douglas Mulholland
Special Assistant to the Secretary
(National Security)
Office of Intelligence Support
Department of Treasury



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Mr. George D. Heavey
Acting Director, Information Division
Office of Enforcement
U.S. Custom Services



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INTERNAL ADDRESSEES (Colombia: Rebound in Marijuana Production)

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OGI/ISID/NAR, [redacted] (6 December 1983)

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Central Intelligence Agency



Washington, D.C. 20505

DIRECTORATE OF INTELLIGENCE

16 December 1983

Colombia: Rebound in Marijuana Production

Summary

Marijuana production in Colombia this year has increased dramatically, up almost 60 percent over last year's drought-affected crop and somewhat higher than estimated average annual production during 1979-81. Our estimate that some 13,500 metric tons were harvested this year is based on:

- ° analysis [redacted] of portions of Colombia's northern marijuana growing region which revealed an increase in the area for the fall harvest;
- ° good weather during the growing season which suggests that yields for the fall harvest were average or above average;
- ° reports from US Drug Enforcement Administration (DEA) officials [redacted] regarding the size of northern Colombia's smaller spring harvest.

Should interdiction efforts approximate last year's, some 11,000 tons of marijuana will be exported to the United States from the 1983 crop. [redacted]

This memorandum was prepared by [redacted] International Security Issues Division, Office of Global Issues with a contribution from the Analytical Support Group. It incorporates information available as of 5 December 1983, comments and queries are welcome and may be directed to the Chief, Strategic Narcotics Branch, OGI, [redacted]

GI M 83-10243
December 1983

Colombia: Rebound in Marijuana Production

Marijuana Production in Colombia

In recent years Colombia has supplied some 70 to 80 percent of the marijuana consumed in the United States. Colombian marijuana is grown primarily in the north in the Serrania de Perija and Sierra Nevada de Santa Marta mountain ranges. Fields are normally harvested twice each year, in March and September, with the fall harvest substantially larger than the spring crop. Poor weather in March-April 1982 lowered yields for the spring harvest and interfered with planting for the fall harvest. Analysis [] of portions of the northern growing region confirmed a drop in the area planted, leading us to believe that only some 8,600 tons would be available for export to the United States. []

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Analysis [] indicates a rebound in production in 1983. The area likely to be harvested in the principal growing regions in the north is up some 55 percent. Weather was favorable throughout the growing season, and fields observed during an aerial survey appeared healthy. Assuming yields were average for the fall harvest and incorporating reports from US Drug Enforcement Administration (DEA) officials in Colombia on the size of the spring harvest, we estimate marijuana production reached some 13,500 tons, up almost 60 percent from the estimated 1982 harvest. Should Colombian enforcement officials confiscate the same amount as they did in 1982, some 11,000 tons of this marijuana crop will be shipped to the United States. []

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Northern Colombia's Fall 1983 Marijuana Cultivation

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The marijuana crop harvested in northern Colombia in September accounts for about 85 percent of the country's yearly production. []

[] This analysis revealed three distinct areas with differing intensities of marijuana cultivation: []

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- a **low density zone** situated principally along the southern and eastern portions of the Sierra Nevada de Santa Marta mountains, encompassing some 710 square kilometers and containing approximately 570 hectares of marijuana--about 1 field per square kilometer;

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- ° a **medium density zone** located along the northern face of the Sierra Nevada de Santa Marta Mountains and also encompassing most of the Serrania de Perija mountains, covering about 740 square kilometers with approximately 3,200 hectares of marijuana and 3 fields per square kilometer;
- ° a **high density zone** located along the Rio Frio and in the central portion of the Serrania de Perija mountains, covering 170 square kilometers with 4,800 hectares of marijuana and 16 fields per square kilometer.

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The total area cultivated in the northern region during April-September 1983--

--is estimated to be 8,570 hectares, an increase of 55 percent over last year's estimated area of 5,520 hectares.*

A comparison of the 1982 crop season shows:

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- ° a medium density zone where none existed in 1982;
- ° an increase of almost 30 percent in the average field size in the high density zone;
- ° considerably less field abandonment in 1983 compared to last year.

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We believe these observations reflect the effects of better weather this year than last. Analysis of weather satellite imagery indicates that more rainfall was available during March-April 1983, a critical period in the marijuana growth cycle of the fall crop, than the previous March-April.

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*Given the methodology used to prepare some estimates, there is statistically a 67 percent probability that the true hectarage lies between 6,570 and 10,570 hectares.

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Table 1

Northern Colombia: Marijuana Area for the Fall Harvest,
1982-1983

	<u>1982 Survey</u>	<u>1983 Survey</u>
Area for fall marijuana harvest*	5,520 hectares	8,570 hectares
Average field size		
high density	1.4 hectares	1.8 hectares
medium density	--	1.3 hectares
low density	1.0 hectares	.9 hectares
Density of cultivation		
high density	17 hectares/sq km	28.3 hectares/sq km
medium density	--	4.3 hectares/sq km
low density	1.6 hectares/sq km	.8 hectares/sq km
Size of cultivation zone		
high density	190 sq km	170 sq km
medium density	--	740 sq km
low density	1,430 sq km	710 sq km
Area cultivated		
high density	3,230 hectares	4,810 hectares
medium density	--	3,190 hectares
low density	2,290 hectares	570 hectares

*Estimates are derived from analysis of [redacted] portions of the northern growing area. When aggregated, these samples result in an estimate at the 67 percent confidence level that is $\pm 1,365$ hectares for 1982 and $\pm 2,000$ hectares for 1983. [redacted]

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Table 2

Colombia: Estimated Marijuana Production

	<u>1982</u>	<u>1983</u>
Potential Production from Area Sown	9,600 (metric tons)	15,000
Northern Colombia		
Fall Harvest	6,500	10,100
Spring Harvest ¹	1,600	2,500
Other Regions	1,500	2,400
Losses due to Colombian Eradication ²	1,000	1,500
Total Harvested	8,600	13,500
Losses due to Colombian Interdiction ²	2,400	2,500
Available for Export	6,200	11,000

¹Based on reports from US Drug Enforcement Administration officials in Colombia [redacted] a limited sample of cultivated areas during both seasons. [redacted]

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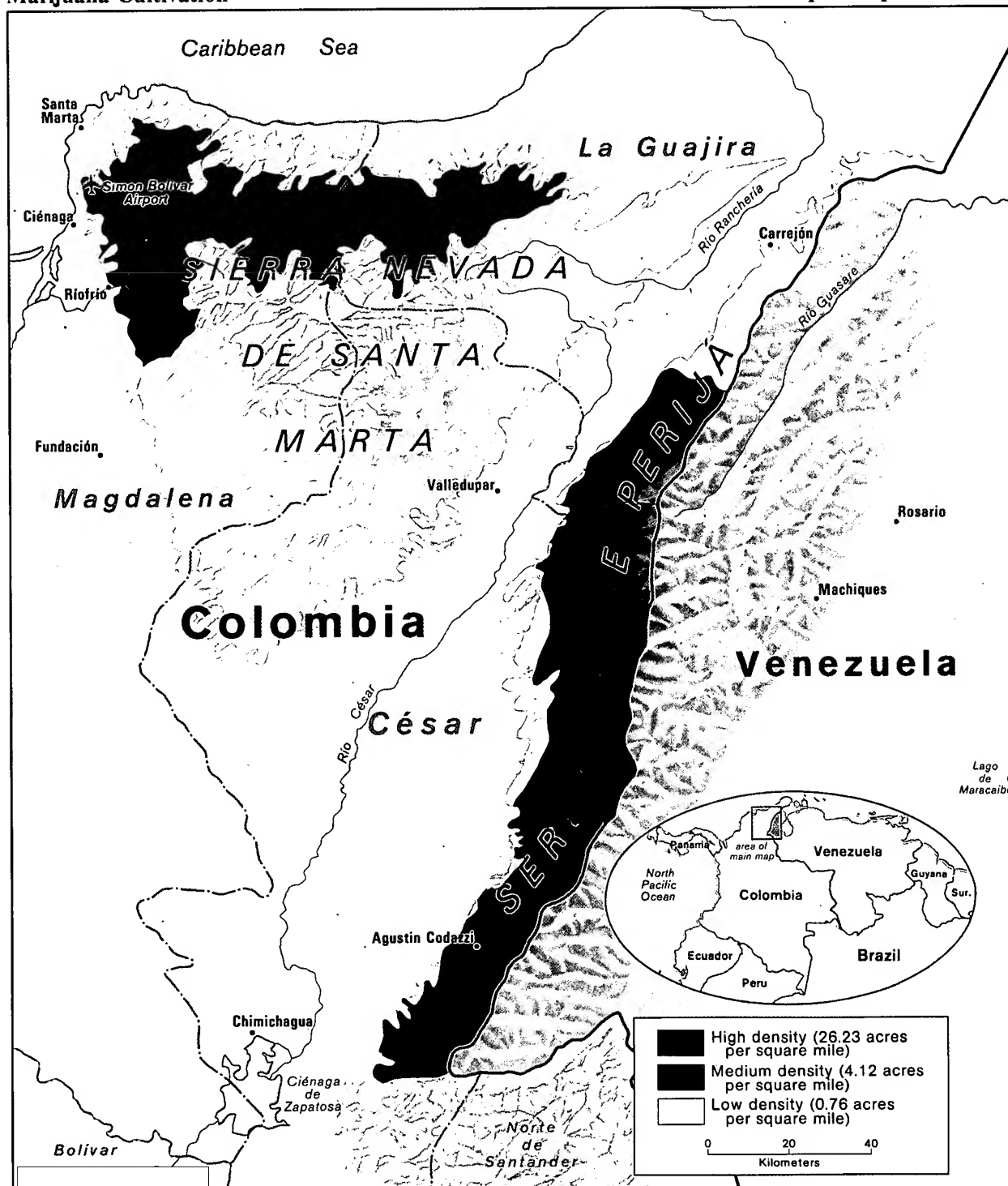
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Marijuana Cultivation

April-September 1983



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